COMMENTS ON THE CHESAPEAKE BAY TMDL
SENIOR BAY SCIENTISTS AND POLICY MAKERS FOR THE BAY

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In December of 2008, more than 20 senior Bay scientists and policy makers met in Annapolis to discuss the plight of the Chesapeake Bay and the pending failure to meet another agreed upon deadline for pollution reduction goals necessary to restore the Bay. A statement was unanimously adopted which concluded that after 25 years of effort, the formal Bay Program and the restoration efforts under the voluntary, collaborative approach currently in place have not worked and current efforts have been insufficient and are failing. Water quality is declining or not improving in much of the Bay and its rivers, and living resources continue to decline. An EPA Bay program analysis concluded that the Bay was severely degraded and that under current programs, it would be 2034 before the agreed upon nitrogen reduction goal was achieved and 2050 for the phosphorus goal.

The group has expanded to 57 Bay leaders from Virginia, Maryland, and Pennsylvania and has since urged the EPA and the Bay states to transition from the voluntary collaborative approach in place for 27 years to a more comprehensive regulatory program that would establish mandatory, enforceable measures for meeting the nutrient, sediment, and toxic chemical reductions needed to remove all Bay waters from the Clean Water Act impaired waters list. We suggested that these mandatory measures must be fully implemented and enforced. These measures should be under existing laws and regulations, as well as under new regulations or legislation that may be necessary.

We have had several plenary meetings and have discussed the Presidential Executive Order for Chesapeake Bay Protection and Restoration and the strategy for restoration and protection of the Chesapeake Bay under Section 203 and the establishment of the Bay TMDL. After thorough discussion, we reached the unanimous conclusion that bold, new, and aggressive actions beyond the strategy were required by the EPA and other federal agencies to make certain that the nutrients, sediment, and toxic chemicals severely degrading the Bay would be reduced as called for by the caps or under the new draft TMDL. These actions must be undertaken in a definitive, regulatory manner with enforceable deadlines with the certainty of penalties.

We are concerned over resistance by the states, some elected officials, and members of the regulated community to EPA actions to establish meaningful TMDLs by the end of this year to and to adopt comprehensive Phase I Watershed Implementation Plans (WIPs) to achieve these TMDLs. Clearly, enhanced regulatory measures for nutrient loading from CAFOs, AFOs, and nutrient and sediment loading from new and existing development are needed. Better controls of other nutrient and sediment flows from farms and the retrofitting of existing developed lands also are essential to remove the Bay's waters from the Clean Water Act's Section 303(d) list of impaired waters.

The EPA and the Bay states have repeatedly failed by wide margins to achieve the agreed upon nutrient and sediment reductions necessary to restore the Bay, particularly from agriculture and from existing and new development. This is due to a failure to adopt the necessary measures to accomplish these reductions. While we fully support increased federal funding for direct, verifiable reductions from nonpoint sources, we are more convinced than ever that the current mostly voluntary approach to agricultural pollutants, especially animal waste, has not and will not succeed without mandatory, enforceable regulations. At best, the

agricultural sector has only achieved one-half of the agreed-upon nutrient and sediment reductions after 27 years of funding enhancements. Further, pollutants flowing from developed lands are the only major pollution source that has been increasing, not decreasing, and it is clear that the states are not doing all that is necessary to control development and the resultant significant increases in impervious surfaces. There also has been a failure to retrofit existing developed areas for better stormwater control as called for in the Tributary Strategies.

Together, the 56 individuals signing onto this statement represent an extraordinary assemblage of Bay leaders from Maryland and Virginia, many of whom were instrumental in initiating the Bay restoration in 1983 that led to the first Bay agreement and the development of the EPA Chesapeake Bay Program.

We all have concluded that aggressive enforcement of current laws with new enforcement strategies to improve water quality in the Chesapeake Bay are necessary to meet the TMDL and weaknesses in the TMDL process and state WIPs are especially glaring in specifying how the significant and necessary reductions in nonpoint source loads will be achieved. The EPA has pointedly suggested this to the states. Missing in the TMDL process and the state WIPs are the requisite new approaches, regulations, penalties, and funding tools to achieve these nonpoint source pollution reductions.

We all have joined together in submitting 25 detailed suggestions to meet the deficiencies and are quite concerned that without these suggested changes, the draft plan for restoring the Bay will fail to achieve the necessary reductions in nutrients, sediment, and toxic chemicals to remove the Bay's waters from the Clean Water Act's Section 303(d) list of impaired waters. This would mean the Bay's living resources will continue their decline. The federal government, especially the EPA, must take aggressive regulatory and legal actions and use mandatory deadlines with the certainty of enforcement to assure compliance. Voluntary, collaborative efforts have failed and the time for action is NOW.

We are particularly concerned over the failure to meet nonpoint source pollutant caps and urge aggressive actions in nutrient and sediment loading from agriculture and development. Without these the Bay is doomed. We fully support the EPA TMDL deadline of the end of this year and urge that there be no postponement.

Despite protestations by the affected states, these jurisdictions have repeatedly failed by wide margins to achieve the agreed upon nutrient and sediment reductions from agriculture and from existing and new development. This is due to a failure to adopt the necessary measures to accomplish these reductions. While we fully support increased federal funding for direct, verifiable reductions from nonpoint sources, we are more convinced than ever that the current mostly voluntary approach to agricultural pollutants, especially animal waste, has not and will not succeed without mandatory, enforceable regulations. At best, the farm sector has only achieved one-half of their agreed upon nutrient and sediment reductions after 27 years of funding enhancements. Further, pollutants flowing from developed lands are the only major pollution source that had been increasing, not decreasing, and it is clear that the states are not doing all that is necessary to control development and increased impervious surfaces, and to retrofit existing developed areas for better stormwater control as called for in the Tributary Strategies.

The EPA's Inspector General issued a report in September 2007 noting that impervious surfaces added over the previous five years resulted in an annual increase of one million pounds of nitrogen flowing to the Bay, impeding Bay restoration. Again in July 2008, researchers with the EPA's Inspector General Office cited

several serious problems hindering the Bay's cleanup, including uncontrolled land development and the limited implementation of agricultural conservation practices. The Inspector General's Office noted that in some cases, there are no clear regulatory programs to control these major nonpoint sources of pollution. We urge the EPA and the other federal agencies not to back down on regulatory efforts and to take the bold, necessary actions to restore the Bay free from political machinations that continue to impede these efforts.

The TMDL and the restoration plan under Executive Order 13508 do not add sufficient new and different tools, regulations, penalties, and enforcement strategies to improve water quality in the Chesapeake Bay. Additional plans must include requirements for implementation and accountability. These documents do recognize that voluntary programs have not resulted in the needed reductions in nutrient loading. To succeed, the TMDL and the WIPs to implement the reductions under it must include strengthened measures to address agricultural and development pollutants. We suggest enforcing current options in the CWA that do not allow downstream impacts and coupling these with related regulations (e.g. Coastal Zone Management), and under the recent Federal Court decision that does not allow additional loads to CWA impaired waters. More tools to control nonpoint source loads are necessary.

EPA and other agencies need to look at the ability to apply other authorities or more rigorously pursue other CWA/TMDL authorities to reduce nonpoint source loads from agricultural operations, including new regulations and enforcement. Requiring readily enforceable mechanisms as part of the required "reasonable assurance" for nonpoint sources in the watershed is necessary for the federal government and the states.

In setting the TMDL, it is essential that there be specific plans to achieve needed reductions in nutrient and sediment loading from nonpoint sources in all 92 waterway segments and that these plans should include an implementation schedule with ongoing verification of implementation and operation to credibly document that they are making real and reasonable progress. Invoking "endangerment" and/or "anti-degradation" authorities could also be used to expand responsibility for addressing water quality impairments from agriculture as well as urban nonpoint sources.

The primary proposed punitive measure to address failure to achieve the TMDL and two-year milestones appears to be a further reduction in the waste load allocation for point sources. Point source controls are expected to achieve their allotted nutrient reductions by about 2012. It appears illogical and unfair to punish this sector if it meets the targeted caps while leaving nonpoint sources without any realistic and certain sanctions. It would be much more effective to seek regulatory sanctions against nonpoint sources, and to identify larger funding sources that are of greater importance to the non-attaining sectors, such as the federal transportation act (or other sources of stormwater funding) or federal agricultural cost share and subsidy payments. We suggest it is more reasonable to identify funding sources that are important to nonpoint sources and reduce them as a consequence for non-performance.

EPA and other agencies need to look at the ability to apply other authorities or more rigorously pursue other CWA/TMDL authorities to reduce nonpoint source loads from agricultural operations, including new regulations and enforcement. Requiring readily enforceable mechanisms as part of the required "reasonable assurance" for nonpoint sources in the watershed is necessary for the federal government and the states.

The comments above and the 25 specific measures detailed below are submitted on the draft TMDL and we would urge EPA to implement the TMDL by the end of this year and to require that these suggestions be

incorporated into EPA's plans for the TMDL and by other federal agencies actions under the TMDL process and the Executive Order restoration plan. We also would urge the inclusion of these measures and requirements in state WIPs to meet the reasonable assurances requirements as you review the WIPs under the TMDL process. We believe these changes are essential to insure the Bay's restoration:

BETTER CONTROLS NECESSARY FOR AGRICULTURAL POLLUTANTS.

1) The EPA should require each state's WIP to include requirements to implement measures, including BMPs, throughout each waterway segment in your state of the 92 designated by the EPA for the entire Bay watershed. These are necessary to achieve the nutrient and sediment TMDLs by a date certain to meet "reasonable assurance" expectations. Each state's WIP should include detailed sanctions for any source that fails to meet the TMDL limits and two-year milestones. The primary proposed Federal punitive measure to address failure to achieve two-year milestones appears to be a further reduction in the waste load allocation for point sources. Point source controls are expected to achieve their allotted nutrient reductions by about 2012. It appears illogical and unfair to punish this sector if it meets the targeted caps while leaving nonpoint sources without any realistic and certain sanctions. It would be much more effective for the EPA and each state to develop regulatory sanctions against nonpoint sources with assured enforcement.

2) Reducing nonpoint source loads from agricultural operations, including any necessary new regulations and better enforcement, should be part of each state's WIP. These must include readily enforceable mechanisms. The required "reasonable assurances" that the states will meet nonpoint source load limits dictate strong, verifiable measures to reduce agricultural nutrients and sediment loads. Assuring monitoring efforts at a reasonable scale for nonpoint source pollutants from agriculture is essential. The monitoring results should be available to the public. The implementation of Best Management Practices (BMPs) needs to be publicly reported at a parcel scale.

3) Discrete, performance-based targets for nutrient and sediment reductions from all nonpoint sources to improve water quality in each of the 92 waterway segments, including all BMPs, should be required in each WIP, and assessments of those BMPs and reduction targets should be required to be conducted by independent third-party entities to assure effectiveness and proper implementation.

4) A significant expansion of the CAFO designation to include most all but the smallest AFOs should be implemented and EPA should include all agricultural lands receiving manures from any AFO as part of the regulated entity/activity subject to CWA permits. It is equally important that assessment and accountability of CAFOs be increased. Current state programs do not provide adequate assurance that the CAFO permits, particularly related to land application, are being enforced. Enforcement must be assured.

5) The EPA should adopt requirements for all land disposal of animal waste/manure that parallel Maryland's regulations under the Maryland Department of Environment for the land disposal of human sludge from advanced wastewater treatment facilities. These requirements should include the provisions already extant for human sludge that require the incorporation of all animal waste/manure into soils within 24 hours of application on land, soil tests to assure the land is not phosphorus saturated, and that prohibit application on steep slopes, highly erodible soils, frozen ground, and in riparian buffers of up to 200'. See the Maryland human sludge disposal regulations at COMAR 26.04.06.09. State WIPs should reflect these changes.

6) The EPA should require that all state WIPs require that on any agricultural lands that receive human sludge and/or animal waste/manure, cover crops should be mandatory for a minimum of one year after

application. Even with the use of cover crops, sludge and animal waste/manure should be required to be injected or incorporated into soils within 24 hours of application. Further, the practice of human sludge or animal waste/manure application to fields with excessive phosphorus levels must be stopped. The WIP should require reducing phosphorus levels to agronomic requirements and soil tests before all applications of human sludge and/or animal waste/manure. These latter measures must be required to assure that phosphorus is not applied where not needed.

7) Greater accountability and verification of performance of agricultural BMPs is essential and the EPA must require this in state WIPs.

8) The EPA and each state WIP should mandate whole-farm water quality plans for all agricultural lands including the next generation of nutrient management, with clear targets, a reasonable implementation schedule, progress checks, and enforcement. This is critical to restoring the Bay and should be mandatory.

NECESSARY MEASURES FOR DEVELOPED LAND POLLUTANTS TO BE INCLUDED IN WIPS.

9) While reducing agricultural nutrients and sediment loadings may be the immediate challenge as farm pollutants are the greatest source of loadings and the most cost-effective to reduce, offsetting the effects of population growth and development by 100% is essential to maintaining any progress made by other sectors. The EPA should act to include measures to expand MS4 jurisdiction over more developed lands, better septic system requirements, and improved growth control measures as these are essential and the EPA should require that these measures be included in each state WIP along with a requirement for completely offsetting growth related loads elsewhere in each of the 92 waterway segments under the TMDL in each state.

10) A requirement is critically needed for no net increases in stormwater discharge rate, volume, and pollutants for all new development for a 5-year storm. Current state stormwater laws clearly do not accomplish this. The EPA, both through the MS4 permitting process and requirements for inclusion in each state's WIP, should assure that each state requires and enforces a no net increase in rate, volume, and pollutant loads from all new development. This will require mandatory on-site containment through environmental site design.

11) EPAS's TMDL process and review of WIPs should assure that measures are included for improved water quality retrofit requirements for MS4 permits and for all developed lands including road construction or reconstruction, and all such MS4 permits should be required to meet the no net increase in rate, volume, and pollutants rule. For re-development, to the maximum extent practicable, no net increase in rate, volume, or pollutants should be required for a 5-year storm and offsets required where this no net increase requirement cannot be met. Each WIP must include funding mechanisms to provide reasonable assurances that such urban retrofit will be accomplished.

12) The EPA should assure that each state's WIP includes provisions for improved water quality through systematic urban retrofits of large areas of developed lands such as shopping centers, large industrial sites, and other large impervious surfaced areas in private ownership, with mandatory measures and timelines for such retrofits.

13) Measures to reduce or eliminate fertilizer usage on residential lawns, golf courses, and public lands should be included in state's WIPs, including measures to prohibit phosphorus in fertilizers sold for maintenance of such properties.

14) The EPA should ensure that all federal and state facilities and public lands in the watershed undertake stormwater retrofits to meet TMDL allocations and state 2-year milestones. The federal and state facilities and lands should follow guidance developed by EPA pursuant to Section 438 of the Energy Independence and Security Act and Section 502 of Chesapeake Bay Executive Order (13508). All new government construction should meet a requirement for no net increase in rate, volume, or pollutants for a 5-year storm.

FOREST LAND PROTECTION AND INCREASED FORESTED BUFFERS SHOULD BE IN WIPS.

15) The EPA should encourage state WIPs to require a no net loss of forest coverage in each Bay watershed of the 92 waterway segments to achieve the nutrient and sediment TMDLs by a date certain to meet "reasonable assurance" expectations. WIPs also should contain detailed measures to expand forested buffer coverage to at least 85% of all the shores of the Bay and its tributaries.

16) State's WIPs should target federal and state funds from land preservation programs for the fee simple or easement purchase of sensitive lands such as forests and wetlands on private lands and farm lands, especially those bordering the Bay and its rivers. Acquisitions should take into consideration State Wildlife Action Plans and Green Infrastructure maps that have been updated to reflect the implications of climate change and expected sea level rise.

WIPS SHOULD INCLUDE SEPTIC SYSTEM NUTRIENT REDUCTION REQUIREMENTS.

17) WIPs must include provisions that require all new and replacement on-site waste disposal systems (OSWDS) in the Chesapeake Bay watershed to be systems that utilize the best available technology (BAT) for nitrogen removal.

18) Each state WIP should include requirements for implementation of a mandatory septic inspection program for existing systems, with a requirement for a best available technology (BAT) system for nitrogen removal in failing systems.

19) Each WIP should contain requirements to evaluate existing clusters of septic systems for connection to centralized sewage treatment that uses Enhanced Nutrient Removal (ENR).

AIR EMISSIONS NEED TO BE REDUCED THROUGH WIPS.

20) The EPA should act to better control air emissions by better regulating and enforcing emission controls from all sources and include similar provisions for each state.

21) All new stationary sources of air emissions in each Bay state that contribute increased nitrogen to the Bay should be offset and each state WIP must include provisions for accomplishing this offset.

We now turn to point source pollutants and recommend the following measures for EPA action under the TMDL process:

BETTER CONTROLS NECESSARY TO REDUCE NUTRIENTS FROM WWTPS IN WIPS.

22) All Wastewater Treatment Plants (WWTPs) should be required to meet nutrient discharge limits of no more than 3.0 mg/l Nitrogen and 0.3 mg/l Phosphorus and these should be included in WIPs.

23) Each state WIP should allocate WWTP pollution loads based on 2010 wastewater flows, assuming a concentration of 3.0 mg/l of nitrogen and 0.3 mg/l of phosphorus. Any increased nitrogen or phosphorus loads with flows beyond 2010 actual flow levels must be offset with equal or greater reductions from other sources.

24) Each WIP must aggressively address and fund infrastructure upgrades to prevent and treat combined sewer overflows.

25) The EPA should act to adopt measures to assure that existing Clean Water Act and other water quality laws are fully enforced, including at all WWTPs, and each WIP should adopt necessary measures to assure such enforcement.

We all firmly believe that the 25 items outlined above are essential if there is to be any reasonable assurance that the nutrient and sediment reductions necessary to restore the Chesapeake Bay will be achieved under the current planned timelines. It will never be easier or less expensive than now. We are hopeful that the EPA will adhere to its TMDL deadlines and those for state WIPs and that you will require each state to adopt the above measures in their Phase I Watershed Implementation Plans and begin a new period where the Chesapeake Bay and its living resources are not subjected to the continuing death by a thousand cuts and are sacrificed on the altar of political expediency.

We believe these changes are essential to ensure the Bay's restoration and urge you to meet the TMDL WIP deadlines set for this year and to turn back any attempts to delay these or the adoption of WIPs.

Thank you.

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